



# **BROCHURE # 52**

## **RESIDENTIAL DISPERSION TRENCH**

### **What is a dispersion trench?**

A dispersion trench is a stormwater facility designed to receive rooftop stormwater runoff and disperse it evenly through native vegetation on your project site.

### **Where can a dispersion trench be located?**

A dispersion trench has a few different factors that affect its location:

- The minimum distance from the bottom of the trench to hardpan or seasonal high water table is 12". The dispersion trench must be located in an area where this is achievable.
- Must be located immediately adjacent to a native vegetative area. The dispersion trench must discharge to an untouched native vegetation area on the project site.
- The vegetative dispersion area must not exceed a 15% slope.
- Dispersion trench must be oriented parallel to topographic contours, with a level bottom.
- Dispersion trenches require that a certain percentage of the property be left in a natural vegetative state.

### **How much area must be protected by the native vegetation covenant?**

The percentage of property that is required to be protected is directly related to what percentage of the property will be impervious area. The table below identifies how much area must be protected.

% Native Vegetation Preserved	% Lawn/Landscape	% Effective Impervious that can be dispersed
65	35	10
60	40	9
55	45	8.5
50	50	8
45	55	7
40	60	6
35	65	5.5

\*Properties with impervious areas exceeding 10% will need to use another form of onsite mitigation.

### **What are the dimensions of a typical dispersion trench?**

Dispersion trenches are typically 2' wide, by 1.5'-3' deep. The length is determined by the amount of impervious area being directed to it.

### **How is dispersion trench length determined?**

A dispersion trench requires 10' of length for every 700 square feet. The maximum length for any leg of a dispersion trench is 50'.

### **What type of Catch Basin (CB) can I use?**

~If the CB *will not* be in a location subject to vehicular loading then one of the 3 options can be used.

- A black manufactured ADS CB. \*ADS pipe with a poured concrete bottom will not be allowed.
- A fiberglass septic tank riser with a welded bottom.
- A concrete CB (Type 1 or Type 30).

~If the CB *will* be in a location potentially subject to vehicular loading (in or adjacent a driveway), you have one option:

- A concrete CB (Type 1 or Type 30)

### **What type of pipe needs to be used in the dispersion trench?**

Perforated Polyvinyl Chloride (PVC) pipe, a minimum of 4" in diameter must be used.

### **How deep in the rock must the drain lines be placed?**

The perforated PVC pipe should be located a minimum of 6" above the bottom of the trench and a minimum of 12" below the top of the trench.



**What type of rock needs to be used in the dispersion trench?**

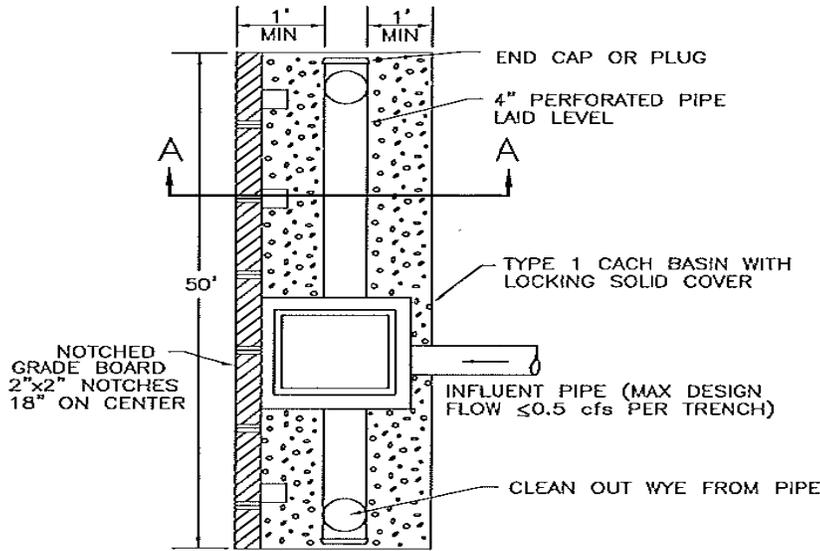
The rock required to be used in the infiltration pit/trench is *round washed rock*, 3/4" - 1 1/2" in diameter.

**Is a weir board required to be installed?**

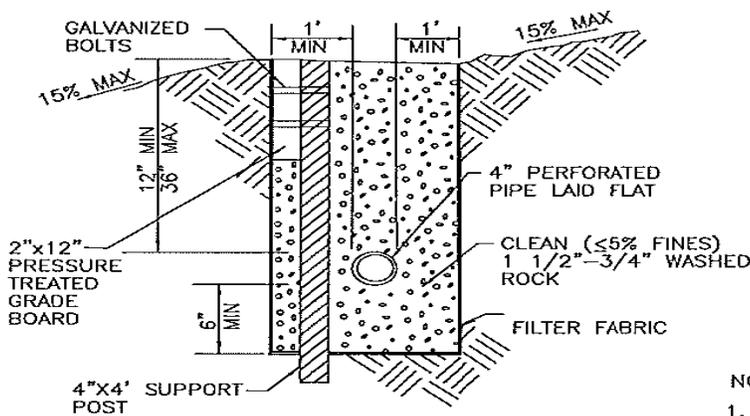
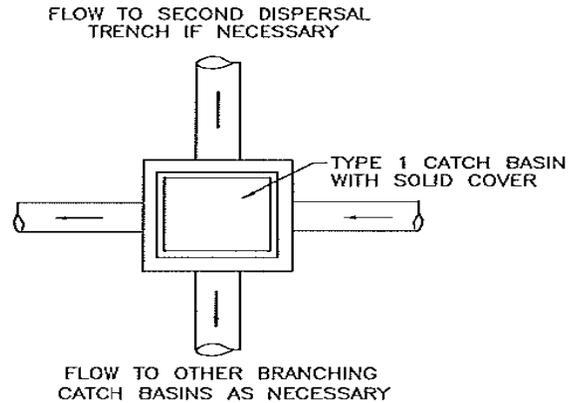
Yes. The 2" x 12" V-notch weir board allows the dispersion trench to discharge in an even flow path preventing release at a concentrated discharge point.

**What does a dispersion trench look like?**

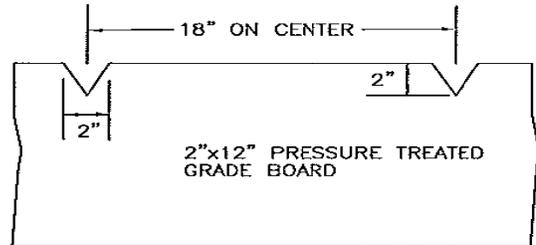
We have attached a detail below that shows what an dispersion trench looks like when constructed.



**PLAN**



**SECTION A-A**



**NOTES:**

1. This trench shall be constructed so as to prevent point discharge and/or erosion.
2. Trenches may be placed no closer than 50 feet to one another. (100 feet along flowline)
3. Trench and grade board must be level. Align to follow contours of site.
4. Support post spacing as required by soil conditions to ensure grade board remains level.